



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

W.
M/023/016

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June 20, 2003

CERTIFIED RETURN RECEIPT
7099 3400 0016 8896 2109

Anthony Christofferson
H.E. Davis Construction
525 West Arrowhead Trail
P.O. Box 488
Spanish Fork, Utah 84639

Re: Initial Review of "Amended" Notice of Intention to Combine Mining Operations, H.E. Davis Construction, Levan and Chicken Creek Mines, M/023/016 & S/023/055, Juab County, Utah

Dear Mr. Christofferson:

The Division has completed a review of your Amended Notice of Intention to Commence Large Mining Operations for the Levan and Chicken Creek mines, located in Juab County, Utah, which was received April 25, 2003. Because of the close proximity of the Chicken Creek mine to the Levan Gypsum mine, we will combine the two files into one. We will rename the Levan Gypsum file (M/023/016) as the Levan Chicken Creek Mine. The current Chicken Creek file (S/023/055), will be closed once the files are combined and the new permit is issued. Please reference any future correspondence for either of these sites to the Levan Chicken Creek Mine, file number M/023/016.

After reviewing the latest supplemental information, we find a number of the deficiencies remain incomplete. A significant amount of the previously requested information was not provided (e.g., designs for the new road, blasting protocol and the location of the city of Levan's water supply wells and pipelines). We believe our informational requirements, as explained both onsite and in previous review letters, were clear. We are concerned that the information was not provided in your latest response. Since the two mines are currently shut down due to the lack of an approved plan, another meeting may possibly be the best alternative to expedite the review and reach tentative approval.

Our comments of your latest submittal are listed below under the applicable Minerals Rule heading. The comments need to be adequately addressed before mining resumes. Please format your response in a similar fashion. ***Please provide a response to this review within 30 days of your receipt of this document, or by July 21, 2003.***

Please respond only to the items requested in this latest review. You may send replacement pages to the original notice using redline and strikeout text, so we can see what changes have been

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made. After the notice is determined complete and technically acceptable, we will ask that you send us two copies of the complete plan. Upon finalization of the permit review process, we will return one copy stamped "approved" for your records.

The Division will suspend further review of the Levan Chicken Creek mine notice until your response to this letter is received. If you would like a meeting to try to expedite this review, please contact Tom Munson to set up a time that is conducive to all concerned. The meeting would need to be held in a timely manner so the issues can be adequately addressed by July 21, 2003. If you have any questions regarding this letter or the review comments, please contact me, or Tom Munson at (801) 538-5286 and 538-5321, respectively. Thank you for your cooperation in completing this permitting action.

Sincerely,



DWH
D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
Attachment: Review
cc: Kay Christofferson, H.E. Davis Const.
O:\M023-Juab\m0230016-LevanGypsum\draft\initialrev-amend-06172003.doc

INITIAL REVIEW OF AMENDED NOTICE OF INTENTION TO COMMENCE LARGE MINING OPERATIONS

H.E. Davis Construction
Levan - Chicken Creek Mine
June 20, 2003
M/023/016

R647-4-105 - Maps, Drawings & Photographs

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

Identify all water sources that could be potentially impacted by mining related activities (springs, stream, and the pipelines).

Based on onsite inspections and conversations with the local mayor of Levan, several culinary springs, irrigation controls, and pipelines were identified within close proximity to the mine. These resources need to be shown on a map of an appropriate scale to show proximity to the mine and the permit area.

This information has not been provided in any detail sufficient to address this issue. One map was included in the plan, but it is not of a scale that is readable. Adequate identification of town springs or pipelines has not been provided. This information needs to be included as a part of the permit application. (TM)

The trucking of gypsum from the Levan -Steele Mine and Chicken Creek Mine has come under scrutiny because of safety issues (the county road is a one lane road). Concerns were also raised regarding the potential impacts to the high pressure culinary water pipelines, which are buried under the road, from the large haul trucks that travel between the two sites. The operator has agreed to work with the County to develop a plan to upgrade and improve the existing canyon road, or to move the truck traffic to the north side of the canyon and upgrade the old Plaster Mill access road (per contractual agreements with the land owners). All information regarding plans for road upgrades in Chicken Creek Canyon must be submitted to the Division and included as part of the LMO permit application.

The new plan failed to provide design or reclamation plans for the road to be reconstructed on the North side of the Canyon. The location and route of this road and all culvert locations and other environmental concerns will need to be addressed. (TM)

R647-4-106 - Operation Plan

106.5 Existing soil types, location, amount

Ten soil samples were taken from each of four areas, and each group of samples was composited to make a total of four samples. The Division needs some additional information about the sampling method. Since these samples were taken from disturbed areas, the Division assumes they came from soil stockpiles and that the soil in these stockpiles was mixed, but the operator needs to confirm whether they were taken from the stockpiles or from other areas. (PBB)

Except for this clarification of sampling methods, the information in the application appears to be adequate for determining the suitability of the soils. Depending on the sampling method used, further information could be needed. The laboratory analyses indicate some nutrient deficiencies, and the textures are finer than would be ideal, but the reclamation plan includes provisions for improving the soil. (PBB)

106.6 *Plan for protecting & redepositing soils*

Most of the existing and proposed disturbed areas are in the same soil type, and the application says the operator will salvage between 0 and 40 inches of soil. This is all of the overburden. According to Section 106.6, soil can be salvaged from 32 acres of the site, and 32,703 cubic yards of soil will be salvaged (an average of 7.6 inches over this much area). Thirty-two acres is just over half of the entire area that has been and is proposed to be disturbed (the total is 60.83), but the operator has not requested a variance from soil salvage requirements. The operator needs to commit to salvage soil from the entire area unless there are conditions that would justify a variance. A soil variance request must be evaluated and approved by the Division. (PBB)

Although there is no request for a variance from topsoil salvage requirements, the operator has requested a variance from highwall reclamation requirements. In Section 110.2, the application says the benches of the highwalls will be covered with five inches of soil then broadcast seeded. Benches will be 20 feet wide and will be spaced every 40 vertical feet with slopes being 0.1h:1v. Using an aerial view of a 160-foot highwall, 60 horizontal feet would be benched and only 16 horizontal feet would be part of the slope where it would be impossible to apply soil or establish vegetation. (PBB)

Only one of the maps, Drawing II D-1, shows a soil stockpile. Section 106.6 says much of the soil that will be used for reclamation of the active mining has already been removed from the mining area and stockpiled below the road that enters the active mine. It does not appear that this statement describes the stockpile shown on Drawing II D-1, because the stockpile shown on this map is not below a road. It would be unusual (and more costly) to store all of the soil from the entire mine at this one site, rather than having a number of stockpiles nearer the disturbances. The operator needs to show soil stockpile locations on one of the facilities maps, or needs to confirm that all soil from the entire site will be stockpiled in one location. (PBB)

The reclamation treatments maps E II-1 and E-II-2 both say five inches of soil will be put back on reclaimed areas, but the first paragraph in Section 106.6 says six inches will be put back and the estimated soil volumes indicate an average of 7.6 inches would be available. While these differences are small and would probably be difficult to measure precisely, the different sections of the plan should agree. Please revise accordingly. (PBB)

Section 110.5 of the application says the ground will not be scarified because the working surfaces are almost entirely composed of bedrock. Five to seven inches of soil over bedrock is not adequate as a rooting medium. The reclaimed area needs to have at least two feet of somewhat unconsolidated material to establish and maintain vegetation, and

the application needs to present a plan whereby adequate vegetation can be established. Is there no way for the bedrock to be ripped? Would it be better to have islands where larger quantities of soil are deposited rather than spreading it evenly? Is there any kind of waste material available that could be used as a subsoil? (PBB)

A method that could be used to insure sufficient rooting depth for final reclamation could be to commit to sub-drill the final lift of the mine. This would leave a portion of the blasted and broken rock on the surface to be reclaimed that would be amenable to ripping prior to placement of the soil. (DJ)

The roads are not “working surfaces” where the Division would expect bedrock to generally be near the surface, but the roads would probably be very compact. The operator needs to commit to rip the compacted roads at least two feet deep. (PBB)

The operator intends to redistribute the soil using a trackhoe that will leave the surface somewhat uneven and should help reduce erosion and increase vegetation establishment. To increase the amount of organic matter in the soil, composted manure will be applied at the rate of 10 tons per acre and incorporated into the soil. This should help alleviate problems associated with the fine texture and nutrient deficiencies discussed in Section 106.5 of this review. As the Division gains more experience with the effects of manure on revegetation, it may recommend altering, probably reducing, the rate of manure application. (PBB)

106.7 *Existing vegetation - species and amount*

The operator needs to provide vegetation cover and species information about the sagebrush/grass community. The areas near the existing mine and proposed to be disturbed include eight vegetation communities of which three were sampled for the vegetation report included in the application. Although the samples include those communities where most disturbance has occurred or is expected to take place, the easternmost mine is proposed to be expanded into a sagebrush/grass community that was not sampled. Sagebrush was not encountered at all in the vegetation cover sampling done in 2000, so it is likely this south-facing slope has different species and cover than the areas already sampled. The data is needed both to establish a revegetation cover standard and for the revegetation plan. (PBB)

106.9 *Location & size of ore, waste, tailings, ponds*

The plan states two small sediment ponds will be constructed on the lower level. Please show the location of these ponds on the disturbed area map (Drawing III B-1). There was no pond sizing criteria or dimensions associated with the access road drainage, please provide these details. (DJ)

R647-4-107 - Operation Practices

107.1 *Public safety & welfare*

107.1.14 *Posting warning signs*

Signs warning that mining is taking place at the sites, a sign at the mouth of the canyon, on the county warning of the haul truck traffic, and a sign describing the standard blasting protocol at the site, should also be posted. (DJ)

107.1.15 Constructing berms, fences, etc. above highwalls

Berms constructed above the highwalls, to prevent access, should be a minimum of three (3) feet high. (DJ)

107.3 Erosion control & sediment control

Sediment and erosion control is not adequately addressed in the current mine plan or on the ground. The operation is required to have adequate sediment control for all mining-related disturbances. Based upon recent onsite inspections, it was apparent that sediment was leaving the site untreated and entering Chicken Creek from the lower portions of the access roads leading into the mine site. The operator must provide plans for adequate sediment controls to address this problem.

The plan states that a new pond will be installed to treat drainage from the road accessing the site. This pond is found on Drawing II D-1. The drawing does not adequately show how the water will get to this pond. It is obvious that these ponds will have to have ditches conveying drainage to the ponds. Please provide the location of these conveyance ditches and their cross-sections. It was mentioned on Page VI-1 of the plan that water/runoff will enter the stream drainage at the bottom of the Canyon. A UPDES permit is normally required for any point source discharge leaving a mine site, sediment laden or otherwise. Please file an application with and obtain the appropriate permit(s) from the Department of Environmental Quality, Division of Water Quality. (TM)

It was obvious during our last site inspection, that the grading of these ditches is going to be crucial to their success in getting this sediment laden surface water to these ponds. The ditch going to the main pond was not properly graded to take all the water from the disturbance. Please supply a watershed map showing what area both ponds will treat. This is necessary to verify the effectiveness of these controls. (TM)

Sediment laden drainage is able to leave the site from the road leaving the site. A ditch needs to be designed to treat this small amount of runoff. The road slopes to the west/inside of the road and a small sediment trap could be installed before it discharges onto the County Road. (TM)

Please address these issues and supply the appropriate engineering drawings to update the plan. (TM)

The operation also needs to address sediment control measures related to the county road, since the grading activities on this road can potentially contribute a significant source of sediment to the creek related to the mining operation.

Haul truck traffic to the upper Chicken Creek Mine site is proposed to move off the County Road and onto an upgraded private road on the north side of the canyon. It is essential that a sediment control plan be provided for the private road as well. This concern was not addressed in the latest revised plan. (TM)

107.4 *Deleterious material safety stored or removed*

The containment placed around the fuel tanks should be sized to contain 110% of the maximum amount of storage of the fuel tanks. (DJ)

A copy of the Spill Prevention, Containment & Control (SPCC) plan for the site should be included in this plan. (DJ)

107.5 *Suitable soils removed & stored*

According to the application, a berm will be built around topsoil stockpiles to prevent erosion and to keep storm water from eroding the piles. Soil removed from roadways will be stored on the shoulder of the road. Soil will be seeded at the end of each season with a quick cover of grass and legumes as recommended by the Division. A recommended seed mix for interim revegetation is attached to this review. (PBB)

The Division is concerned whether soil stored next to the road will be protected from salt and other potential contaminants. The application should address this concern and show how these soils will be protected, or whether additional protection measures are necessary. (PBB)

R647-4-109 - Impact Assessment

109.1 *Impacts to surface & groundwater systems*

Baseline information on the quantity and quality of the water associated with these springs should be included as part of the application (any historical, seasonal flow and water quality information would be useful).

This comment was not addressed. The information is still requested. (TM)

An assessment of the projected impacts to the surface and groundwater resources is also required. The operator should state how these resources will or will not be impacted by the mining operation, and what measures will be implemented to mitigate any potential impacts. Erosion and sediment control measures must be addressed if mining related impacts are anticipated that may affect the surface water resources (i.e., Chicken Creek). It is also important that the assessment include the potential blasting impacts to these resources. The site specific blasting protocol and any proposed monitoring or mitigation provisions should also be outlined so that no adverse impacts will be realized to the water resources.

The blasting protocol was not provided, merely a comment about how it would be studied was supplied. This is not adequate. A blasting protocol and assessment of potential blasting impacts will be necessary prior to approval of the plan. (TM)

Section 106.9 of the plan states that no water will be discharged from this site. However, this section also implies that once the water has settled in the ponds, it will be allowed to leave the site. Please clarify which of these two statements are correct. (DJ)

109.2 *Impacts to threatened & endangered wildlife/habitat*

No threatened or endangered species are known to exist in the area, so there should be no effects. This section of the application satisfies regulatory requirements. (PBB)

There are six golden eagle nests within a one-mile radius of the project area with four being within 0.5 miles. The R647 rules do not address impacts to any species of wildlife except threatened or endangered species, so golden eagles are not protected under these rules. However, golden eagles are protected under other laws, and the operator will need to coordinate its activities with other agencies, including the Forest Service, the Fish and Wildlife Service, and the Division of Wildlife Resources. These agencies will need to know the locations of the nests in relation to proposed mining, anything known about past nesting activity, and whether the nests are visible from the mine sites. (PBB)

The application includes a plan for avoiding and monitoring the eagle nests. We will defer to the comments and recommendations from these other cooperating agencies as to the adequacy of this plan. (PBB)

R647-4-110 - Reclamation Plan

110.1 *Current & post mining land use*

According to this section of the application, both the current and intended postmining land uses are wildlife habitat. Section 110.3 says the haul road that will be used for the east site will not be reclaimed because it is an existing road that cattlemen use for access to their property. Therefore, it appears that the road will be retained to facilitate grazing, which would be a postmining land use. Accordingly, this should be added as a postmining land use with an explanation that it only applies to the road providing access to other land. (PBB)

110.2 *Roads, highwalls, slopes, drainages, pits, etc., reclaimed*

The placement of 5" of soil over solid rock on the highwall benches, without any surface preparation, will not provide sufficient growth depth to support revegetation. A consideration of some type of preparation of the bench surfaces should be considered before the soils are applied. (DJ)

Reclamation of the small sediment basin to be constructed below the lower pad should be included in the reclamation plan. (DJ)

110.5 *Revegetation planting program*

Soil replacement and seedbed preparation are discussed in Section 106.6 of this review. The application includes a seed mix composed of 14 native species adapted to the site. The Division recommends that the amount of seed applied for each species be reduced by one-fourth to one-third. The seeding techniques discussed in the application comply with regulatory requirements. (PBB)

R647-4-111 - Reclamation Practices

111.2 *Reclamation of natural channels*

The plan states, “whenever drainage is disturbed, the new channel will be lined with a good graduation of angular, hard 6”-24” rip-rap to engineered guidelines.” Because channel reconstruction will need to be included in the reclamation surety, an estimate of the amount of drainage that will be disturbed over the life of this permit should be made. A copy of this engineering standard for this construction should be included in this plan. (DJ)

111.3 *Erosion & sediment control*

More information is needed regarding the erosion and sediment control practices for the haul road on the north side of the canyon and what reclamation practices will be employed to prevent sedimentation of Chicken Creek. (TM)

111.8 *All roads & pads reclaimed*

Any haul road construction relating to ore haulage from the Chicken Creek Mine will need to be included in the reclamation plan and bonded for reclamation. (DJ)

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Recommended Seed Mix for Interim Revegetation
H. E. Davis Construction, Levan Chicken Creek Mine
M/023/016

Prepared by the Division of Oil, Gas and Mining (May 9, 2003)

<u>Species</u>	<u>Scientific Name</u>	<u>Pounds Pure Live Seed/Acre</u>
Intermediate Wheatgrass	<i>Elymus hispidus</i>	7
Slender Wheatgrass	<i>Elymus trachycaulus</i>	3
Hard Fescue	<i>Festuca ovina</i> var. <i>duriuscula</i>	1
Cicer Milkvetch	<i>Astragalus cicer</i>	4